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Two new species of *Squalius*, *S. adanaensis* and *S. seyhanensis* (Teleostei: Cyprinidae), from the Seyhan River in Turkey

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Abstract

Two new species of *Squalius* are described from the Seyhan River drainage in Turkey: *S. adanaensis* from the lower part of the drainage and *S. seyhanensis* from the upper part. *Squalius adanaensis* is distinguished from the other species of the genus in Anatolia, among other characters, by having the flank scales with a dark spot on each scale pocket but covered by the posterior margin of the previous scale, and very few melanophores along the posterior margin; 38–42 + 1–2 lateral line scales; and a maximum known size of 157 mm SL. *Squalius seyhanensis* is distinguished from other species of the genus in Anatolia, among other characters, by having the flank scales with a dark spot on each scale pocket, exposed, and densely-set melanophores along the posterior margin, forming a conspicuous reticulate pattern; 42–44 + 1–2 lateral line scales; and a maximum known size of 240 mm SL.

Key words: Turkey, Anatolia, Cyprinidae, *Squalius adanaensis*, *Squalius seyhanensis*, new species, taxonomy

Introduction

The genus *Squalius* Bonaparte, 1837 comprises medium-sized midwater fishes widely distributed in Europe and West Asia. The species of *Squalius* were for long placed in *Leuciscus*, until morphological and molecular data showed that *Leuciscus* as earlier understood was paraphyletic (e.g. Bogutskaya, 1994; Zardoya & Doadrio, 1999). Approximately 45 named species are recognized in the genus (Özuluğ & Freyhof, 2011).

The species-level taxonomy of the members of the genus in Turkey remains to be settled. Özuluğ & Freyhof (2011) recently revised the species of central and western Anatolia and recognised ten species. Four of them, *Squalius aristotelis* Özuluğ & Freyhof, 2011 from Tuzla drainage, *S. carinus* Özuluğ & Freyhof, 2011 from Lake Işıklı basin, *S. cappadocicus* Özuluğ & Freyhof, 2011 from Melendiz River in Lake Tuz basin, *S. recurvirostris* Özuluğ & Freyhof, 2011 from Lake Eber, Akşehir, and Ilgın basins, were described as new. The other six valid species are: *S. anatolicus* (Bogutskaya, 1997) from Lake Beyşehir basin, *S. cephaloides* (Battalgil, 1942) from northern Armutlu Peninsula, *S. cii* Richardson, 1857 from southern Marmara Sea basin, *S. fellowesii* (Günther, 1868) from Madra south to Eşen River, *S. kosswigi* (Karaman, 1972) from Tahtalı River, *S. pursakensis* (Hanko, 1924) from Sakarya River. Özuluğ & Freyhof (2011) also mentioned that additional species and several unnamed species are known from eastern Anatolia. In fact, several species have been described or reported from eastern Anatolia: *S. orientalis* (Nordmann, 1840) from the rivers and streams of Caucasus, *S. turcicus* De Filippi, 1865 from Aras [Kura River drainage] and Kura rivers, *S. berak* Heckel, 1843 from Kueik River, *S. lepidus* Heckel, 1843 from Tigris and Euphrates rivers, *S. kottelati* Turan, Yilmaz & Kaya, 2009 from Orontes, Ceyhan and Seyhan rivers (Heckel, 1843; Hanko, 1924; Battalgil, 1942; Berg, 1949; Geldiay & Balık, 1999; Bogutskaya, 1994; Kuru, 2004; Stoumboudi *et al.*, 2006; Turan *et al.*, 2009; Özuluğ & Freyhof, 2011).

In the past 40 years, authors who studied the aquatic fauna of southern Europe have shown that the *Squalius* of the Mediterranean basin are much more diverse than reported in the classical (northern European) literature; they clearly constitute a number of distinct lineages (see, e.g., Doadrio & Carmona, 2006, for the Iberian Peninsula;